



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,668	07/21/2003	Yasuhiro Yoshioka	FSF-031391	3824
37398	7590	07/02/2008		
TAIYO CORPORATION 401 HOLLAND LANE #407 ALEXANDRIA, VA 22314			EXAMINER  CHEA, THORL	
			ART UNIT	PAPER NUMBER
			1795	
			MAIL DATE	DELIVERY MODE
			07/02/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/622,668

Applicant(s)

YOSHIOKA ET AL.

Examiner

Thori Chea

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,5,7,11 and 13-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5,7,11 and 13-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S5108)  
Paper No(s)/Mail Date 09242007
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. This office action is responsive to the response on April 9, 2008; Claims 1, 5, 7, 9, 11, 13-19 are pending in this instant application; claims 2-4, 6, 8, 10 and 12 have been canceled.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5, 7, 9, 11, 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 10096310 (EP'310).

The EP'310 discloses a photothermographic material substantially as claimed. The photothermographic material contains one or more bisphenols compound having formula encompass the scope of formula (R1) and (R2) of the present claimed invention. See the generic phenol compound on page 3, [0013], compound (I) and the description of -L- and R1 to R8 on page 5 such as L is -CHR<sup>9</sup>-, R9 is hydrogen or alkyl; R1, R8 represent secondary alkyl group or a tertiary alkyl group; R2, R4, R5, R7 represent hydrogen, halogen, or an alkyl group, more preferably hydrogen; R1, R3, R6, R8 represent an alkyl group, more preferably, a primary group having 1-20 carbon atoms, a secondary alkyl group having 3-20 carbon atoms, or tertiary group having 4-20 carbon atom, and the substituent thereof includes alkoxy group, aryloxy group, hydroxyl group, acyloxy group, amino group, heterocyclic group. The compound of formula (I) is exemplified on page 7, compound (I-6), wherein a tertiary alkyl as R1 and R8; an alkyl having 4 carbon atoms as R3 and R6; and an alkyl group (-CH<sub>3</sub>) associated with L. This

compound is within the scope of formula (R1) of the present invention. The compound of formula (I-4), (I-9) or (I-10) are within the scope of formula (R2) of the present claimed invention. On page 5, [0034] to [0037], it is disclosed that “preferably R1 and R8 independently represent a secondary alkyl group or a tertiary alkyl group. If a secondary alkyl group or tertiary alkyl group is selected, coating amount can be markedly reduced, and hence the production cost of the photothermographic material and labors may be markedly reduced. Further, if secondary alkyl group or tertiary alkyl group is selected, image storability is extremely degraded, unless a compound having a phosphoryl group is used in combination. However, by using them in combination according to the present invention, the image storability is markedly improved. In view of development activity, tertiary alkyl groups are preferred as R1 and R8. While R1 and R8 may be identical or different, they are preferably identical to each other. R3 and R6, unsubstituted alkyl groups are preferred. Specific example includes methyl group, ethyl group, propyl group, butyl group t-butyl group, t-amyl group, cyclohexyl group, 1-methylcyclohexyl group and so forth. More preferred are methyl group, ethyl group, isopropyl group and t-butyl group, and most preferred are methyl group and ethyl group. Preferably, R2, R4, R5 and R7 independently a hydrogen atom, a halogen atom or an alkyl group, more preferably hydrogen group. L represent a group  $-S-$  or a group  $-CHR9-$  where R9 represent a hydrogen or alkyl group. See the other additive such as compound having phosphoryl group on pages 20-34; the halogenated compound on pages 60, [0242], [0243]; the amount of reducing agent on pages 11, [0039], [0040]; the amount of silver salt on page 35, [0074]; the toning agent and the ultrahigh contrast developer on page 41; the hydrazine derivative on page 49, [0167], [0168]; and time and temperature processing on page 53, [0210].

EP'310 discloses the use of one or more "o-polyphenol compound", and herein the "o-polyphenol compound" taught therein encompasses the scope of the compound of formula (R1) and (R2) claimed in the present claimed invention. The compound has different activity accordingly to the substituent associated therein. See for instance the compound having tertiary alkyl groups in R1 and R8 is used for development activity. Therefore, It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use one or more compound within the scope of formula (I) of EP'310 with an expectation of achieving a highly useful material with sufficient image density and image storage stability.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over EP 10096310 (EP'310) as applied to claims 1, 3, 5, 7, 9, 11, 13-17 above, and further in view of Oya et al (US 2001/0051319A1).

Oya et al discloses the compound within the scope of formula (A-2) in claim 7 as development accelerator of a photothermographic material. See compound of formula (2) in the abstract. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the phenol compound taught in Oya et al as development accelerator for the material of EP'310, and thereby provide a material as claimed.

#### ***Response to Arguments***

5. Applicant's arguments filed April 9, 2008 have been fully considered but they are not persuasive because of the reason set forth in the above rejection. The applicants rely on the Declaration under 37 CFR 1.132 to obviate the prima facie case of obviousness over EP'310. It was argued that: It will be clearly understood from the Declaration that the unexpectedly remarkable effects of the present invention can be obtained even when the ingredients contained

therein (namely, the photosensitive silver halide, the non-photosensitive organic silver salt, the reducing agent and the binder) are varied as long as it satisfied the requirement of: using the reducing agent represented by the formula (R2) with an amount of 5 to 40% by mol or less relative to a total amount of the reducing agents under the condition of the specific combinatorial utilization of the reducing agent represented by the formula (R1) and the reducing agent represented by the formula (R2). It should be noted that the phthalazine compound, which is not necessarily contained in the photothermographic material of the present invention, is also used and subjected to manipulation in the experiments of the Declaration in view of a skilled persons' knowledge that a phthalazine compound generally provides large effects to tone and tone stability of photothermographic materials. The data shown in the Declaration would thus further support the Applicant's position that the unexpectedly remarkable effects of the present invention can be obtained even when the ingredients contained therein are varied as long as it satisfied the requirement regarding the reducing agents.

It is the Examiner's position that the argument is not persuasive. It is the Examiner's position that the Declaration under 37 CFR 1.132 as filed fails to obviate the prima facie case of obviousness rejection. The applicants asserts that the results shown in the Declaration are unexpected, but fails to provide a clear explanation as to why the results such as being presented would have been found unexpected by the worker of ordinary skill in the art at the time the invention was made. "[A]ppellants have the burden of explaining the data in any declaration they proffer as evidence of non-obviousness." Ex parte Ishizaka, 24 USPQ2d 1621, 1624 (Bd. Pat. App. & Inter. 1992). A mere assertion of unexpected results is not sufficient to overcome the prima facie case of obviousness rejection. The Declaration is not commensurate with the scope

of the claimed invention. First, the claimed invention is related to the claiming of the relative amount of the relative amount of the reducing agent represented by formula (R2) with respect to the relative amount of the total amount of the reducing agents. The scope of the total amounts of the reducing agents included the sum of the amount of reducing agents other than those of the amount of the reducing agents represented by formula R1 and R2 presented in the Declaration. See for instance the language "the reducing agents for thermal development include the reducing agent which ...". The term "include" is an open ended language, and the scope of the claimed is not limited to the sum of the compounds of formula R1 and R2, but any compounds known as reducing agent for silver ions. Second, the results shown in the Declaration is related to the specific amount of the silver and the amount of reducing agent presented in the Example 1 of the present specification. See the amount of coating silver and the amount of the coating reducing agent shown in the Examples. The scope of the amount of the total amount of the reducing agent is unlimited. The Declaration shows the results related to the compounds of formula R1-1, R1-3, I-9, I-6, I-9 and I-13 wherein the secondary and tertiary alkyl containing a branched of methyl group. The scope of the secondary and tertiary alkyl represented by  $R_{11}$  and  $R_{12}$  contains an alkyl of unlimited number of carbon atoms. The secondary and the tertiary alkyl with 3 to 4 carbon atoms is the more preferred groups disclosed in the presented specification disclosure. "The data is not reasonably commensurate in scope with the claims, which, as drafted, are broad in scope and cover mixtures of numerous untested compounds. Lindner, 457 F. 2d at 508, 173 USPQ at 358." Moreover, the organoleptic evaluation is based on naked eyes, and it is improper to use this type of evaluation to conclude that the results would have been unexpected by the worker of ordinary skill in the art since the

vision may change from one people to another. It is understood from the EP'310 that the bisphenols reducing agent having secondary or tertiary alkyl substituent is more reactive than that containing the primary alkyl group. Supposedly, the all samples contain same amount of silver (i.e. fixed amount of silver), it would have expected that the changing the amount of R1 and R2 would change the color tone of the silver image, since the color of silver image depend on the amount and the reactivity of silver and reducing agent. The worker of ordinary skill in the art would have optimized the amount of the reducing agent to provide a photothermographic material with a color tone within the diagram bounded by the value of a\* and b\* presented in the Declaration.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.



7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TC  
2008-06-24

/Thorl Chea/  
Primary Examiner,  
Art Unit 1795